



AMERICAN ENTERPRISE INSTITUTE

**FROM POVERTY TO PROSPERITY:
A CONVERSATION WITH BILL GATES**

DISCUSSION:

**BILL GATES,
BILL AND MELINDA GATES FOUNDATION**

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AMERICAN ENTERPRISE INSTITUTE**

**12:45 PM – 1:45 PM
THURSDAY, MARCH 13, 2014**

EVENT PAGE: <http://www.aei.org/events/2014/03/13/from-poverty-to-prosperity-a-conversation-with-bill-gates/>

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ARTHUR BROOKS: Good afternoon ladies and gentlemen. I'm Arthur Brooks, president of the American Enterprise Institute. And we're delighted to welcome all of you today to this event, entitled "Poverty to Prosperity."

So, this is Bill Gates. (Laughter, applause.)

BILL GATES: Thank you.

MR. BROOKS: With his wife, Melinda, he's the co-chair and co-founder of America's largest private foundation: the Bill and Melinda Gates Foundation. They work to reduce poverty and expand health care overseas and to improve education here in the United States among other things. Previously, he was the chairman and CEO of Microsoft, the world's largest software company, which he co-founded in 1973. Most importantly, like me, he's a native of Seattle and somewhat of a Seahawks fan, which is good.

But that's not what we're here to talk about. We're here to talk about his incredibly important work with the foundation, the work that he's doing here and around the world. He shares so many of the priorities of the American Enterprise Institute to build a better life for people here and everywhere – people who suffer from need, people who suffer from disease, people who suffer from tyranny. What can we do about these things?

Well, he's asking the big questions and he's putting his own resources behind the answers. And we're going to hear what he has to say about his latest work.

So, welcome to AEI. It's an honor to have you and to be among all of our friends here.

You just issued your annual letter for 2014. I recommend that everybody read it. It's a very interesting piece of work. It's detailed, and it explodes a lot of myths about poverty around the world. And you offer an incredibly bold prediction. You say that there will be almost no poor countries remaining by the year 2035. What do you mean by that?

MR. GATES: Well, the primary measure, which has all sorts of challenges, is GDP per person. But it's still – we don't have a substitute measure. So just if you take that – World Bank classified countries with over 1,200 per person per year as moving up into a middle-income bracket, so moving from low income to middle income. And we have today 45 countries that are still in that low-income category.

And what I'm saying is that, by 2035, there should be less than 10, and they'll mostly be either places like North Korea, where you have a political system that basically

creates poverty, or landlocked African countries where the geography, the disease burden, the disparate ethnicities mean that they haven't been able to bring together a government that in terms of education, infrastructure, health does even the most minimum things for them.

And so we're on this rising tide that's not recognized. It's overwhelming how prosperity is spread around the world, say from 1960, where there were very few rich countries and a gigantic number of poor countries. Now most countries are middle-income countries, and poor countries are much smaller. Now, just saying that they'll all move up past that threshold doesn't mean they won't have poor people within the countries; it doesn't say their governments will be fantastic, but it will be a lot better on average than it is today.

MR. BROOKS: That's an extraordinary thing. We have a tendency to despair when we look around the world, and we have a tendency to say the world's not getting better because of the way that we see the news. But you're saying that's a myth, right?

MR. GATES: Yeah. I think that a deep problem in perception is that if you want something to improve, you have a tendency to be bothered by the status quo and to think that it's much worse than it is. And that can be beneficial because you don't like, say, the level of violence in the world, the level of poverty, the level of – number of kids dying. But if you divorce yourself from the true facts of improvement and look at the exemplars, look at what's worked – if you get sort of a general despair about is the world improving, then you won't latch on to those examples.

The Steven Pinker example, one of my favorite books of all time, is that if you ask people, "Is this one of the most violent eras in history?," they will say yes. Overwhelmingly, Americans say yes. Well, it's overwhelmingly the least violent era in history. And so what it means is your disgust with violence actually increases, and that's partly why we take steps and why within our own society and the world at large it's come down so dramatically.

MR. BROOKS: I love your optimism. And so, based on your optimism, given the fact that the world will have only a few poor countries in the year 2035, what's the Gates Foundation going to be doing in 2036? (Laughter.)

MR. GATES: Well, there are a lot of diseases. Over 80 percent of the difference of why a poor child is 20 times more likely to die than a child in a middle-income country, it's these infectious diseases. It's diarrhea, pneumonia, malaria. And then there's a few adult diseases which are way more prevalent in poor countries – TB, HIV.

And we've taken on as a central mission – it's a little bit over half of what we do – to get rid of those diseases. And so that will remain our priority until we're basically done with those. And those are tough enough that I'd expect us – it will take us 30 to 40 years to really be done with those. And then we will have a crisis because we will have the problem of success and we'll have to say, OK, what is the health inequity between

well-off countries and poor countries? Is it, you know, obesity, heart disease, and what interventions? And even before 30 years are up, we'll start to think about this.

But right now, we're sort of maniacally focused in our health on those poor world conditions because we see that between research and getting things like vaccines and drugs out there, we can basically save a life for about \$2,000. But everything we do should be benchmarked – if it's not that effective, then we shouldn't do it. So, you know, we're pretty specialized in making breakthroughs in those areas.

MR. BROOKS: You've been involved in projects all over the place, from eradicating polio outside the United States to improving schools in cities and even in rural areas around the United States. What do you consider at this point, given all of the resources that you put into these important projects, to be your most important victory or your area of greatest success, and what did you learn from it?

MR. GATES: Well, we've had the most success in global health. You know, there's over six million people alive today that wouldn't be alive if it wasn't for the vaccine coverage and new vaccine delivery that we've funded. And so it's very measurable stuff.

And, in fact, if you applied a very tough lens to our work, you can almost say, OK, why are you even involved in U.S. education? Well, we have a reason that you could say is not all that numerical, which is that the success that I had, that Melinda had, came from the U.S. education system. It came from the U.S. system of encouraging innovation and business and, you know, protecting the intellectual property.

And so we feel like we need to have – take what we think is the greatest cause of inequity, the greatest challenge to America's continued leadership in innovation, which is the failures of the education system, that we need to be dedicated to that even though the risk that we might not have a dramatic impact is much higher in that work than it is in any of our health or agricultural or sanitation or financial service work, which focuses on the poor countries.

You know, we feel that it's critical that America get improved education, but that's very hard work. And, over the last 20 years, where government spending in this area and philanthropic spending, although it's a tiny percentage, has gone up dramatically, the proof in achievement in terms of reading ability, math ability, dropout rates, you know, kids graduating college, there's been hardly any improvement at all despite massive resource increases that have gone into the area. So it's critical, but it's not easy and there's no proof that it's necessarily going to be dramatically better 10 or 20 years from now.

MR. BROOKS: So let me ask you about that intransigent set of problems that we have in U.S. education. And I understand that there are certain problems that you can – you can eradicate the guinea worm. You can't necessarily eradicate ignorance. Here at

AEI we're trying to improve the free enterprise system. That doesn't mean we'll be done at some point. I mean, that's just the nature of social enterprise as I understand.

Here in Washington, D.C., we talk about public education all the time. This is the capital of the free world. We should have the best education system, and it should be an exemplar to the whole world. I think we should – we should agree. We're pumping more than \$18,000 per kid per year in the system, and 15 percent of eighth graders read at a nationally acceptable standard. So what do we do?

MR. GATES: Well, it is phenomenal the variance in how much is spent per student. You know, Utah's below \$6,000 per student per year. A lot of states are in the \$7,500 per student per year (range). You've got some that spend more than D.C. – New Jersey would spend a fair bit more – the Northeast as a whole is where the biggest spending takes place. And yet, there is no correlation between the amount spent and the excellence that comes out, you know. Yes, Massachusetts is good, but if you take the high-spending states as a whole, then you get Pennsylvania, New Jersey, Washington, D.C., mixed into that, and it doesn't look like there's any correlation. So it's a very strange system.

Washington, D.C., on a relative basis, actually has improved a fair bit over the last three or four years – a combination of improved personnel policies, shutting some schools, letting the charter schools take a somewhat higher share of the cohort. It's about the fourth largest of all the districts in the nation, New Orleans being number one in terms of the percentage kids go to charter schools. And the charter schools here on average are quite good. So, you know, there are some things that have gone well, but it's still an abysmal system.

And, you know, the fact that there isn't more of a consensus on what should we be doing to the personnel system and using innovation to, say, be almost as good as the countries in Asia, it's got to be a concern both from an equity point of view and from an overall country competitiveness point of view.

MR. BROOKS: So if spending more money is not the answer – I mean, it would be great if it were, because as a rich country we can do that. But there are innovation ideas about choice, charters, etc. If it's the disruptive innovations that are going to make it happen, how do we inject those ideas more systematically into public bureaucracies, not just in schools, but in government in general?

MR. GATES: Well, if you look at the education system, the amount of actual research that goes on to understand why some teachers are so extremely good, giving their kids more than two years of math learning in a year, and why the teachers who are at the other extreme, giving less than half a year of learning in a year – why we're not taking those best practices and at least trying to transfer those into the other teachers by doing observation and feedback, you know, having the schools of education really drive for high-quality teaching, it's not a personnel system that right now is focused on teacher improvement.

Teachers get almost no feedback. They get almost no sense of, OK, I'm good at this and I should share that with other people. I'm not very good at this, and therefore I should learn from other people. It's very different than most other so-called professions.

And, at the same time, technology is coming along in terms of taking the classroom video, and, you know, sharing it, having people commenting on it, delivering personalized learning to your kids so that you can assess where each of them are and tune lessons according to what they're having the challenge with. The opportunity is there, and that's what our foundation invests in. It invests in studying the very, very good teachers. We took 20,000 hours of video and looked at various measures, you know, what were they doing differently? And we created a lot of model districts where there are so-called peer evaluators who are in the classroom, observing, giving feedback. And, you know, it looks like the results on that are very good. And so there are points of light that if we could get it adopted permanently and scale it up, it would start to move the dropout rate and the math and reading achievement.

As you say, it's tough, though, because when we invented the malaria vaccine, no school board gets to vote to uninvent it, whereas, you know, if you make an advance on personnel system – Senator Alexander, when he was governor of Tennessee in the 1980s did a pretty good system where people got feedback and evaluation, and, you know, it looked like it was starting to work pretty well. And yet, it disappeared.

MR. BROOKS: The malaria virus is not unionized. Excuse me. I'm sorry. That's not my place. Please. (Laughter.)

MR. GATES: Yeah. OK. I certainly agree that there are various groups that can stand for the status quo. When you want to come in and change things, they are worried not as much for the students, but for the teachers. So they can defend the status quo.

But if it was the case in America that the less unionized places were like Singapore and more unionized places were poor, and if you had some direct thing, and you said, OK, well, here it is, and now we can explain it, that would be one thing. That is not true.

Our education is very poor across the entire country, and it does not correlate to unionization. Massachusetts, pretty heavily unionized, they do relatively better. You know, some other places not unionized, like – actually, on an absolute scale, OK, take Arizona – it isn't – there is no single factor you can say that in the 50 states, when that's been removed – financial constraints, union constraints – that something like Asia is taking place.

MR. BROOKS: Let's go back outside the United States just for a minute again. You wrote in your letter that there's a lot of misunderstanding about U.S. foreign aid. Now, if you read what people are writing about aid, there are a lot of critics who think it's

just hopelessly ineffective. Some think it's actually positively destructive. What's the misunderstanding about foreign aid from your point of view?

MR. GATES: Well, whenever we give foreign aid, you have to, for any particular grant, say what your goal is for that grant. If your goal is famine relief, then you should measure the grant by whether people have been starved to death. You shouldn't go in and say, OK, did the GDP go up?

If you're trying to have a political friend like, you know, you want Egypt to sign a treaty and be a friend and that is your goal, then you just – and you're not measuring the dollars according to human development – then don't come back later and say, oh, their GDP didn't go up or you didn't achieve human development.

So a lot of foreign aid, things are labeled foreign aid, to take an extreme case like sending money to Mobutu when he was the dictator of Zaire, it was labeled foreign aid but it was just kind of a joke that, you know, people act like, well, yeah, that's going to help the people in that country. Well, ha, ha, ha. Now, because you don't have that cold-war imperative, a lot of the aid is actually trying to uplift their health or agriculture, you know, get these countries to self-sufficiency.

And so the aid community does a lot more measurement. We've learned. We have a lot more rich countries. Korea was a huge recipient. Now it's turned around and is a very significant donor. So you have more rich countries giving to far less poor countries – China, Brazil, Mexico, Thailand, they were aid recipients in varying degrees. Now they're no longer aid recipients. India, the aid it needs is very targeted. A very small part of it is GDP. Within 10, 15 years, they won't need to be an aid recipient. So this is a field that makes advances.

And when you label it aid, it seems mysterious. When it comes to inventing the seeds of the green revolution that avoided famine in Asia or the smallpox eradication that was a U.S.-led effort, that a disease that was killing two million people a year hasn't killed a single person since 1979, when you look at that, you say, well, was that worth it? Well, I guess it was worth it. There are so-called global public goods creating seeds, medicines or – (inaudible) – vaccines for these infectious diseases that the normal market mechanism does not work; that is, it's not rational for a profit-seeking company to do a malaria vaccine because there is – even though it kills a million children a year, the parents of those children don't have enough money to justify the research. And so it's a market failure.

Now, markets are extremely good. They work – you know, they're the best mechanism we have. The more you can use them, whenever you can use them, that is – you know, that's one of the key mechanisms along with science and government that have led us to be so much better off than we are – than we were hundreds of years ago. But for the diseases that we work on, there is no – the R&D would not show up except for government aid and philanthropy.

MR. BROOKS: Well, so your philanthropy is working alongside government aid to be sure. And you show that in your letter and we've known that for a long time. But there are a lot of people who believe very strongly that the presence of philanthropy like yours is evidence that the government simply isn't doing enough to help people.

And I'm going to quote Ralph Nader, who once said that – that's not a laugh line, you people. There's a rowdy crowd here. Ralph Nader once said, "A society that has more justice is a society that needs less charity." What do you say to that?

MR. GATES: You don't want to depend on charity for justice. Charity is small. I mean, the private sector's like 90 percent, and government's like 9 percent, and philanthropy is less than 1 percent. There are things in terms of trying out social programs in innovative ways that government is – just because of the way the job incentives work – they're not going to try out new designs like philanthropy can and they're not going to have volunteer hours coming in to leverage the resources like philanthropy can.

So philanthropy plays a unique role. It is not a substitute for government at all. When you want to give every child in America a good education or make sure they're not starving, that's got to be government because philanthropy isn't there day in and day out serving the entire population. It's just not of the scale or the design to do that. It's there to try out things, including funding disease research or, you know, academic studies to see if something is more effective.

So I'd agree with that Nader quote. If you want broad justice, you'd better be doing that through government mechanisms.

MR. BROOKS: Does that mean that we need less charity, however, if we have enough justice?

MR. GATES: Well, I guess if you have perfection, then you don't need charity anymore.

Charity plays a huge role in America. Our universities, one of the reasons that they are world-class is because there's a tendency of the graduates who do well to give back to those universities. And that is the envy of the world. Every other country is trying to think, OK, how do they get this magic cycle going where they create successful people in their universities and then they help make those universities be a lot stronger?

In terms of various scientific ideas, you know, Hughes Medical Foundation – there's just a whole ton of things – Rockefeller Foundation, if you go back in time, they invented things that the government research projects were not moving into those areas, not doing that work. The March of Dimes invented the polio vaccine. You know, the thing that we're using to go out and eradicate, make it the second disease after smallpox that gets eradicated, this is the oral polio vaccine. That's 10 doses, and this thing costs \$1.30, so 13 cents per kid. That was philanthropic money, March of Dimes money, that

caused both its predecessor called IPV, which was the Salk shot (this is the Sabin oral); they created those things, so philanthropy has, you know, some amazing hits to go along with lots of money that was probably wasted.

MR. BROOKS: Now, there's a related question to my last one, which is the number of people who talk about charity and free enterprise as if they were in conflict. They believe that capitalism, that people who trust capitalism because they don't believe charity is a good solution to problems, etc. – in other words, there's an antagonism between markets and nonmarket mechanisms that are philanthropic, and how do you square those? I think I understand, but I'd like to hear your thoughts on that as well, given the fact that you've been involved in one of the most important capitalistic endeavors in the history of our economy as well as the biggest foundation in our country.

MR. GATES: Well, once you get past basic research and drawing the boundary of how much is government funded and how do you define is a tricky area. There is a market failure for research as a whole, not just research for the poorest. But, once you get past that, most innovation is driven by private enterprise – the magic of the chip, the optic fiber, software, the magic of new drugs, new vaccines, all of that stuff – how you come up with it, how you make it safe, that's happening in private enterprise.

So, for our foundation, where we're trying to help the poorest, our relationship with the pharmaceutical companies has been fantastic. And it's great – every time they're successful, they come up with a new drug, they manage to keep profitable because of that. That's great for us because it means they're going to have a little bit more understanding to help us with our issues and a little bit more on the way of resources, all totally voluntary on their part to pitch in.

And so the private sector – you know, we've got to bring private-sector agriculture in all of these countries. That is the ultimate sustainable solution. Charity, as I said, won't be there all the time. Government aid won't be there all the time. The question is how do you get them out of the poverty trap? You need – you know, right now 40 percent of their kids don't – in Africa, don't develop mentally so that they could ever, say, be fully literate. That is through malnutrition, treatable malaria, a variety of health insults, they're not achieving anywhere near their cognitive potential. And so do you need to go in and remove that barrier, that friction, in order to get them into a sustainable situation?

In Africa, and particularly the disease burden, the way the geography works, the split of ethnicities, it's been given the toughest problem: to create countries that are totally self-supporting, you know, running a middle income or above democratic-type system. They'll get there, but they, for a variety of reasons will be the last – most of the last – to achieve that.

MR. BROOKS: Philanthropy can stimulate the mechanisms of free enterprise, which will then become self-sustaining and help these people well beyond the scope of your foundation or any bit of government aid?

MR. GATES: Yeah. Absolutely. The poor farmers, the real solution for them is to be farmers who are in the marketplace, selling enough of their produce to diversify the diet of their kids, to be able to buy the school uniforms where those are necessary, and even when a tough year comes along to have saved up enough that they're not starving during the year where weather is working against them.

MR. BROOKS: People think a lot about leveraging technology in international development. We hear about that constantly, you know, the big headlines like give every child a laptop, etc. – and these are great ideas. And what I want to know is from your point of view, what's the most exciting opportunity for technology to change lives today?

MR. GATES: Well, I think the greatest injustice in the area of health. And, you know, that's my bias. That's the area that I spend time in. And I think a child dying is an injustice no matter where that takes place in the world. And this is another one of those good news stories that's not well known.

In 1960, 20 million children a year under five were dying a year. Now we're down below six million, and we have over twice as many people in that age cohort, so the rate reduction is pretty phenomenal. And we can see a path – by working on diarrhea, pneumonia, malaria – we can see a path to get that over the next 20 years below three million a year. And, at the same time as you do that, you're not only reducing deaths. You're taking all these kids who survived and yet don't survive intact – that is their brain never fully develops; their body never fully develops. And you're reducing that quite dramatically.

And so I'd say health is a necessary condition to get a country to have kids who, when they go to school, they can learn to read, and, you know, therefore, it's the thing we've chosen as the big priority and I think will unlock the potential of these countries.

MR. BROOKS: So a lot of us in this room are probably looking at your incredible successes and thinking, you know, if I could construct the world's largest foundation, I could do a lot of great things. But for the rest of us, who can't do that, you must have thought about how each one of us can make a difference as well. What kind of advice do you give to everybody who wants to act philanthropically notwithstanding the limits on their own personal resources?

MR. GATES: Well, certainly, picking that cause of inequity, whatever it is – you know, pick a local charter school, pick a disease that somebody you know was touched by, go out to a poor country and see what's going on with the health or education there – you know, all these problems require volunteer hours, expertise, somebody who's articulate.

And a lot of people get frozen just seeing that the need is infinite and say, OK, when I pick, will it be the best pick? Well, there's no sort of deeply rational way we're going to have time to enumerate all the things you could work on, and, you know,

compare all those factors and then jump into that. It's best wherever you can get your passion engaged to pick something and jump in.

For most people, the first philanthropic thing they'll do will be something in their neighborhood where they can go and, you know, put their hands on it, meet the kids at the charter school where they're volunteering their time, meet the kids that they're mentoring and see the progress that they're making. If you could connect up with the poor countries, the marginal impact of your time or even pretty small resources is higher in many cases than anywhere else you're going to look, but it's harder to access that and figure out how you're going to, you know, stay involved in a sustained way.

So as long as you're engaged with something, then throughout your career, maybe more time will be freed up, maybe you'll be able to draw your friends into that. And, if you're lucky financially, then you can apply resources against it.

And so the diversity – I mean, when de Tocqueville came to the U.S. and saw all these nonprofit things people were doing, he was amazed. And other countries have not to this day gotten the level of civil engagement that we've gotten. There are factors that show that it's even going down somewhat in America, that we're less unique in this respect than we've been, and that's unfortunate because it is a real strength.

MR. BROOKS: So you recommend that each of us given whatever resources that we have do something that we can touch and see with these particular resources, thus giving us a sense of the good that we're creating. And I appreciate that advice.

I want to turn now to some of our colleagues here and start with one of our colleagues from education. Your foundation has generously made it possible for us to do a lot of reform work on K-12 education and higher ed as well. And so I want to go Mike McShane, who is over here. Mike has got a question that's been coming up all over Twitter and across our email hoping that we would ask you this question. Mike.

MIKE MCSHANE: Thank you so much. Your foundation has been known for supporting the Common Core curriculum standards that have become increasingly controversial. And the question that I have is, why? What promise do you see of the Common Core standards? How do you see them as a lever for improving the American education system?

MR. GATES: OK. So what is the Common Core? It's a very simple thing. It's a written explanation of what knowledge kids should achieve at very various milestones in their educational career. So it's writing down in sixth grade which math things should you know, in ninth grade which math things should you know, in twelfth grade which math things should you know.

And you might be surprised to learn how poor those – I'll call those standards, but to be clear, it's not curriculum. It's not a textbook. It's not a way of teaching. It's just

writing down should you know this part of algebra? Should you know trigonometric functions? Should you know – be able to recognize a graph of this type?

And doing that very well is hard because there are certain dependencies: if you teach it in the wrong order; if you try and teach too much at once, too much too early, which the U.S. was doing a lot of that, it can be very, very poor.

And if you compare – we have 50 of these things and there was quite a bit of divergence. Some states had trigonometry, some didn't. Some had pie charts, some didn't. So, ironically, what had happened was the textbook companies had gone in and told the committees that make these things up that they should add things over time. And so we had math textbooks over double the size of any of the Asian countries. And we had the ordering in almost every one of our 50 – which is strange. You think if you had 50, one of them would randomly be really, really well ordered. (Laughter.) Some were more ambitious than others.

So, for example, being high; that is, having the twelfth grade expectation be high, there were a few like Massachusetts that were quite good in that respect. And so when kids from Massachusetts take international tests or the SAT, anything, they do better, better than the rest of the country. And so often, when you see those country rankings, they'll take Massachusetts and show you where it would be if it was a separate country. And it's way past the U.S., that now is virtually at the bottom of any of the well-off countries, with the Asian countries totally dominating the top six slots now. Finland had a brief time where they were up high, and now they're not even the European leader anymore.

So a bunch of governors said, hey, you know, why are we buying these expensive textbooks? Why are they getting so thick? You know, are standards high enough or quality enough? And I think it was the National Governors Association that said we ought to get together on this.

A bunch of teachers met with a bunch of experts, and so in reading and writing and math, these knowledge levels were written down. And at some point 46 states had adopted that curriculum, a variety of competitive curriculum, now that small companies can get into it because it's not just doing a book for Florida, and so the sort of barrier to entry that was created by the large firms there goes away. The idea that you – those committees rig it so you can't use the old textbooks, you know, that idea will go away because in math, this can have real durability.

Changing your math standards is not like some new form of math that's being invented. And there has been in a sense a national expectation. When you take the SAT test, it has trigonometry on it, so if you're in a state that doesn't have that, you're going to get a low score. And they use a certain notation in the way they do math and certain states were different than that, so you're screwed. If you move from state to state –

MR. BROOKS: In the vernacular.

MR. GATES: – you experience discontinuity because of this. And it's made it very hard to compare things. And this is an era where we have things like Khan Academy that are trying to be a national resource and yet they – you sit down, it will tell you, are you up to the sixth grade level? Are you up to the ninth grade level? Are you ready to graduate from high school?

And so this Common Core was put together. If somebody – and states will decide this thing. Nobody is suggesting that the federal government will, even in this area, which is not curriculum, dictate these things. States can opt in. They can opt out.

As they do that, they should look at this status quo, which is poor. They should look and find something that's high achievement, that's got quality. And if they can find something that's that, if they have two they're comparing, they ought to probably pick something in common, because to some degree, this is an area where if you do have commonality – it's like an electrical plug – you get more free market competition. Scale is good for free market competition. Individual state regulatory capture is not good for competition.

And so this thing, in terms of driving innovation, you'd think that sort of pro-capitalistic market-driven people would be in favor of it, but, you know, somehow, it's gotten to be controversial. And, you know, states will decide. Whatever they want to decide is fine. But, at the end of the day, it does affect the quality of your teaching, does affect when your kids go to take what are national-level tests, whether they are going to do well or not do well.

MR. BROOKS: Speaking of competition, let's go to competition outside of the United States and the extent to which it helps people who are poor. And I want to turn to Paul Wolfowitz now.

PAUL WOLFOWITZ: Thanks very much for coming. It's terrific to have you here. I have a quick comment and then the question. The question is about trade. But the comment is about this issue of waste in foreign aid.

The amazing work that you're doing in the foundation, that the U.S. government is doing with PEPFAR, other things demonstrate that there are lots of ways to spend foreign aid that are the opposite of wasteful; they're accountable, they're measurable; they make a huge difference in people's lives. But I would submit that there is a lot of waste.

And I'll give you just an example. If you give \$100 million to a government that is so tyrannical that you really have no idea what's happened to that money, by your numbers, that's \$100 million that could have saved 50,000 lives. And I think you'll have a stronger case for foreign aid if you go after the things that are wasteful as well as the things that are good.

But here's my question. In talking about foreign aid, you correctly say, we spend less than 1 percent. We could afford to spend more. In fact, we spend more in agricultural subsidies. Well, the agricultural subsidies aren't just a waste of money. They are making it harder for poor countries to export the very products that their competitive natural advantages would lead them to, which is in agriculture.

I wonder what you think about our agricultural subsidy systems and what its impact is on the poor countries that you visit in terms of their trade opportunities.

MR. GATES: Well, we certainly distorted the market in agriculture prices. There are some cases where it's fairly extreme, like sugar. And there are some cases where it's more modest, like the big – the big cereal crops.

In Africa – there's a few things like cotton, horticulture, where you can make a clear case that the sort of dumping out of the rich countries because of strange subsidies actually is affecting their income. They're not yet as competitive in the big-value crops as they need to be.

So we have a lot of work to do in Africa. Africa right now can barely feed itself. So the huge rise in productivity – it's called the green revolution, that was more than a factor of two increase in Asian cereal crops – that never happened in Africa because it has a unique ecosystem, so even maize and wheat in Africa are very low productivity. That's very fixable, both with conventional breeding and with GMO-type breeding to give much, much better seeds.

And so the effect of trade barriers once we fix African agriculture, the impact of trade barriers, then the numbers will get very, very large. And, you know, it's just too bad that both Europe and the U.S. sort of – and Japan – compete to distort those markets. And, you know, it doesn't look like there's going to be any change in that. Now it's called mispriced insurance instead of price supports, but it's still money. And, as you say, it reduces some level of efficiency in terms of who should be providing which products.

MR. BROOKS: One of the most striking statistics that I've seen as an economist comes from a Catalan economist, his name is Xavier Sala-i-Martin at Columbia University, who notes that since you and I were kids, the percentage of the world's population living on \$1 a day or less has declined by 80 percent.

It's just amazing. This question is related to that and it comes from our economist Michael Strain, who says that the spread of free enterprise has dramatically reduced the share of the world living on \$1 a day or less, this standard that we've had since we were kids. Is that the right standard? You're looking at 2035 to wipe out at least average poverty across all but maybe 10 countries in the world. What should the standard be? What kind of measurements are you using, and how should we be thinking about it to update those measures?

MR. GATES: Well, any single measure isn't going to capture what needs to go on. The extreme poverty line now is \$1.25 a day, and the poverty line is \$2 a day. And you can certainly argue that they should be a bit higher than that. Also the way that GDP is measured in poor countries is extremely random – not random. It's inaccurate. The errors bars are gigantic.

There's a book by Jerven called "Poor Numbers" that just talks about – you know, for example, for a subsistence farmer, what are you putting into that GDP number, you don't have some market transaction. And there's a book by Charles Kenny, the "Getting Better" book, that talks about the fact that GDP misses a lot of things. If something comes in, like a measles vaccine or increased literacy, that improvement in human condition doesn't necessarily show up in GDP at all. In fact, there were radical advances in health and literacy in Africa during a 30-year period that its GDP per person moved not at all, zero.

And so you want to put into a human development index; you want to put in GDP; you want to put in some health, maybe under-five mortality, maternal mortality. You'd want to put in something about education, something about freedom. And people like Mo Ibrahim have a variety of, in his case, mostly governance measures that I think are throwing light on these things. There's still some work to be done to capture this.

GDP, if you have to pick one single thing, I'd still say it is – it is the measure. Even within rich countries, you do have relative poverty. And so the idea of do you worry about getting enough to eat; if you have a medical condition, can you expect to get treatment; there are things like that that even if the economics kind of look OK, you know, then you shouldn't be satisfied. And so the field of economists giving themselves a hard time about how weak these measures are, I think over the next decade, there can be a real contribution to how we look at well-being beyond GDP.

MR. BROOKS: Let's talk about poverty right here in the United States a little bit more. And I want to turn to my colleague, Robert Doar.

ROBERT DOAR: Thank you very much for coming, and thank you for all that you do for people around the world. Poverty in the United States is often related to employment and economic growth. And I wanted to test your optimism a little bit and ask whether you thought we could get back to a 4 percent annual GDP growth in the United States, and if so, how? What would be the key things to make that happen?

MR. GATES: Yeah. You know, I'm not a fan of the way time-series adjustment for comparing GDP between various points in time is done. I think it meaningfully understates the rate of progress.

If you take, say, how you get news, your ability to get news, as far as the GDP is concerned, the news business is down. It's employing less people. It's gathering less money. And are you impoverished in terms of your ability to search and read articles today versus, say, 30 years ago? Probably not.

You know, buying encyclopedias, you know, I bought it – my parents bought a World Book. I read it. You know, I had to learn the world alphabetically. Very weird way to learn things. You know, now, every kid who has Internet access has Wikipedia.

And so whether it's in the area of technology or medicine or various things, you're – there's a lot of a qualitative nature that's not captured in those things. So whether the gross number goes up or not, the rate of improvement in livelihood, you know, I think will be very rapid in the future.

I do think tax structures will have to move away from taxing payroll because society has a desire to have employment. Of all the inputs, you know, wood, coal plastic, cement, there's one that plays a special purpose, which is labor. And the fact that we've been able to tax labor as opposed to capital or consumption, you know, just shows that demand for labor was good relative to other things. Well, technology in general will make capital more attractive than labor over time. Software substitution, you know, whether it's for drivers or waiters or nurses or even, you know, whatever it is you do – (laughter).

MR. BROOKS: We wonder that too sometimes. (Laughter.)

MR. GATES: It's progressing. And that's going to force us to rethink how these tax structures work in order to maximize employment, you know, given that, you know, capitalism in general, over time, will create more inequality and technology, over time, will reduce demand for jobs particularly at the lower end of the skill set.

And so, you know, we have to adjust, and these things are coming fast. Twenty years from now, labor demand for lots of skill sets will be substantially lower, and I don't think people have that in their mental model.

MR. BROOKS: So aligning the incentives in our economy to move away from taxing labor, moving to something like a progressive consumption tax is just a smart thing to do to stimulate – to have an economy that's better aligned?

MR. GATES: Well, I think economists would have said that a progressive consumption tax is a better construct, you know, at any point in history. What I'm saying is that it's even more important as we go forward because it – the distortion – I want to distort in the favor of labor. And so not only will we not tax labor, things like the earned income tax credit, you know, when people say we should raise the minimum wage, I think, boy, you know, I know some economists disagree. But I think, boy, I worry about what that does to job creation.

The idea that through the income tax credit you would end up with a certain minimum wage that you'd receive, that I understand better than potentially damping demand in the part of the labor spectrum that I'm most worried about.

MR. BROOKS: So something like a guaranteed minimum income for people who are working full time through an expansion on the EITC or a wage subsidy seems like the right way to go.

MR. GATES: Yeah, one of my favorite AEI papers – I didn't get time to look it up last night –

MR. BROOKS: He's going to give us his top 10 list here. (Laughter.)

MR. GATES: No, it's the – looking at consumption instead of the income. Because income's complicated. If I'm a student who's, you know, making no income, but I'm investing in my capabilities – OK, my income looks funny. If I'm a trader who had a bad year, my income looks funny. Consumption really is what you care about. So when people say, hey, Mr. Gates, you should feel guilty because you have so much money; well, it's not that I have money. It's my consumption I should – you know, if I'm supposed to feel guilty, it's my consumption. (Laughter.)

The part that is going to philanthropy really is in a sense in the pocket of the poorest, assuming that we're smart about getting it to benefit them. And the idea that consumption should be progressively taxed, I think that makes a lot of sense. People have tried to do that by doing particular taxes on luxury goods, some things like that. That's very – not very effective. It's sort of picking favorites type things. But yes, consumption should be progressively taxed.

And we should understand the consumption. Inequality of consumption is more an injustice than a number in a book is.

MR. BROOKS: So inequality of consumption is the real inequality we should be worried about. I suppose you'd also say that inequality of opportunity is that which is the greatest affront to dignity. I think I'm sort of paraphrasing –

MR. GATES: Yeah, no, I agree with that.

MR. BROOKS: Is that fair to say?

MR. GATES: Yeah, absolutely. Both measures, we should understand inequality of opportunity and inequality of consumption way better than we do today.

MR. BROOKS: Right. We've been doing a lot – we've had a lot of interactions with dignitaries from India. We just had the Dalai Lama here a couple of weeks ago. And we're going to have Sri Sri Ravi Shankar, who is a very prominent guru, who has many, many millions of followers here. And we're talking about Indian issues, in particular, of late.

Sadanand Dhume is our scholar in Indian studies. And he has a question about that country.

SADANAND DHUME: Thank you very much. I have a broad question about India. When you look at your engagement with the country, what do you think it's done well, and where do you think it needs to do the most work?

MR. GATES: Well, India has a lot of very socialistic policies having to do with labor and land and – the fact that it has not risen as a manufacturing power is an indictment of its government policies. That is, as China's incomes went up, the place that the world should have moved to next, as the manufacturing hub of the world absolutely should be India. And that's only happening to a very, very tiny extent. And it has to do with, you know, regulatory complexities, infrastructure quality.

Now, you know, I'm optimistic about India. We've put more into India than any country in the world. India benefits from a funny form of competition, which is competition between the states. And so, you know, when one state really gets its act together, the other states tend to feel jealous and they, you know, are kind of looking at what policies led to that. The states in the north that we're particularly focused on, Bihar, Uttar Pradesh should lead in every human development number, as well as income. But the improvements – and we have a big partnership with Nitish Kumar, who's chief minister in Bihar. The new chief minister in Uttar Pradesh decided that these health things that we care about he'd get very involved with.

And so we're seeing a very fast rate of improvement there. Vaccination coverage – we got polio. The last polio case there was three years ago, which is an amazing triumph. We've taken the polio quality audit group and we've turned it into a primary health care audit group that's looking at where do workers not show up? Where does supply chain not work? Why don't people go? India's health is very complicated because they have a lot of these – a private sector that's very low quality. And the government hasn't figured out how to get the private sector to be high quality. And yet, they haven't built the capacity in the public sector.

But you know, things – time is on our side in India. It's just frustrating, you know, they haven't adopted a few new vaccines. That between – there's two new vaccines that will save over 400,000 lives per year in just India alone. And they're being quite slow on that issue.

So India's great. And in 15 years, you know, we'll probably be out of India because its budget will get bigger and it'll allocate more of it to health.

MR. BROOKS: Why did the – what result – the delays and actually the permitting and what owes to that? I suppose the virus has been unionized there.

MR. GATES: The suspicion of – the bureaucrats really like the status quo. The way their career system works, you're much better off not to change things. And so getting somebody to say, "Yes, we'd like to spend more money on a new vaccine," knowing that there's a crowd that's going to come in and attack that. There's a little bit of

conservatism. And there's an election coming up, hopefully – you know – if you get close to an election, you get particular paralysis in the bureaucracy. Post the election, there's a lot of optimism that things will, both in terms of deregulation and taking on new health initiatives, that things will be even more aggressive.

MR. BROOKS: Your work all over the world is in so many facets and so many different areas. And I asked you to survey the sample of things that you've done to talk about the things you were proudest of, the greatest successes, what you've learned from that. I suppose I should ask you also what was, you think, in your view, your greatest failure and what you learned from that?

MR. GATES: Well, we fail all the time because we back scientific approaches for creating vaccines and drugs that fail. We did a thing in education, which was changing the high school size to be more like 400 than 1,500. That actually – where we created a community, where the adults and all the kids, they had an expectation of what the kids were doing. That actually had good results. It raised attendance. It lowered violence. It actually raised completion rate about 15 percent.

What it didn't do on any meaningful level was raise the educational level of the kids who graduated. And so we called it college readiness. But we had a view of what sort of the reading, writing, math skills you'd have on graduation. It hardly moved that at all.

And so when our goal was to get more kids to have the income uplift that a four-year degree provides you, it didn't look like we were – we weren't going to get to what we wanted to at all. And so we step back and say no. We have to get involved with helping teachers be more effective. We've got to learn about why the teachers in this country are not being more effective.

And so that was a big change of strategy. Some people call it a failure. It's a failure in the sense that our high goals for four-year completion were not going to be achieved. The kids were all better off in the smaller schools, measurably better off than they had been in the gigantic high schools.

MR. BROOKS: Now, the reason that that's an encouraging lesson is that you learned something and you didn't adhere dogmatically to what you wished worked, but rather what did work. Are you able to take this lesson to public policymakers who tend to stay with the public policies that they wish worked, but manifestly don't?

MR. GATES: Well, public policy – we need more people examining effective ways to achieve public policy goals. And it's unfortunate that, a little bit, the idea of making things more effective and getting rid of things, those are, you know, separate issues. So there should be a, you know, a class of people willing to say, OK, in terms of helping with deprivation in America, could we, by having less vertical programs, maybe achieve that for – you know, even be neutral about – for the same amount of money we spend today?

And then, as a separate question, OK, you know, is that – are we spending too little or too much? Because the complexity of improvement is high – gathering data, trying different things out, and political dialogue isn't very good at very complex things, a lot of the airtime, instead of being about relative approach, is about more or less, more or less.

You know, take health care costs. Left, right, center – show me your best ideas for bending the health cost curve. Just getting rid of something, OK, is that going to bend the health care cost curve? What is the, you know, supply-demand equation, the nature of the professional rules, the nature of the innovation pipeline and the incentives in the innovation pipeline?

I think there's a dearth of ideas that are being really discussed that relate to what other than education may be the biggest, you know, government budget issue we face, which is are those health care costs going to crowd out every other government function.

MR. BROOKS: This is submitted from one of our friends by email. The Gates Foundation divides its attention between philanthropic priorities here in the United States and overseas. There's a real need and there's a lot of inequality, opportunity inequality and consumption inequality, as you and I've discussed, here at home. So how – and this is, I guess, a question about the execution of philanthropy – how do you decide how you're going to allocate the resources between these competing needs here in the United States and overseas?

MR. GATES: Well, Melinda and I picked two things. We picked what we thought was the greatest inequity in the country that had created the conditions that allowed us to have this outside success. And that was education, both K-12 and higher ed. And then we decided what's the greatest inequity globally. And there we started. And the core work is around global health. And that's expanded a bit. Now, it's got sanitation, agriculture, financial services, three or four additional things that are there to help uplift the poor.

So we – you know, we've got two centers of activity. And you do have to specialize. And so far education has been our big domestic – we did a few other things. We put computers on libraries. We do a fair bit of things locally in the Seattle area, Washington State. But the big thing has been education.

MR. BROOKS: I want to turn now to my colleague John Makin.

JOHN MAKIN: Do I ask a question? (Laughter.)

MR. BROOKS: If you could, put your statement in the form of a question.

MR. MAKIN: Yes, I would. (Laughter.) Well, we have two things in common. We both spent a lot of time in Seattle, I teaching at UW, while you were revolutionizing

the world. And we also think a lot about economics. But my question really has to do with the relationship between the Gates Foundation and the World Bank.

When I started to think about questions for you, I looked at the World Bank's budget and I saw that they – I believe they lay out around between \$40 and \$60 billion a year on a wide range of topics. So when you entered this field, did you feel – did you believe – you probably did – but how did you think about approaching it? Would you be catalytic with respect to the World Bank? In other words, get them to do things that – or do things yourself that they're not doing? For example, the reduction in infant mortality, which is certainly a big success story, really was not underway for a lot of the time that the World Bank had substantial resources.

Was that something that attracted you? Do you think that you can be more flexible than the World Bank in terms of moving from one priority to another? Really, how do you mesh with the World Bank? Thanks.

MR. GATES: Yeah, we do a lot with the World Bank. I had dinner with Jim Kim – a long dinner – last night, because we overlap a lot in health and agriculture, and even areas we don't overlap. We don't do roads, but our agricultural programs work a lot better when there's a road. (Laughter.) You want to get the inputs in and the outputs out. A road is a very clever way to do that. (Laughter.)

And you know, it's tragic. Africa, both in terms of power infrastructure that we need and roads is way, way behind. And they're – and Africa really is bumping up on GDP levels that won't go up unless they solve those infrastructure problems. They've got to solve the health problems. They've got to solve the agriculture productivity. You know, unfortunately economic advance requires a lot of ends, a lot of things that come together, including education and governance as well.

The World Bank numbers, though, you can't really compare them directly to our numbers because those are loan numbers. And so you have IBRD loans that are market rate loans. And you know, they tend – you know LIBOR – they tend to be pretty competitive. But it's the IDA piece and sort of the forgiveness part of that loan portfolio that is the really significant overlap with what our foundation does.

And there're a number of actors out there. UNICEF, in the childhood space. The agency that did the most for child mortality was a guy named Jim Grant during the 1980s, where he convinced countries they needed to raise vaccination rates. And they were below 30 percent when he started. And they went up to over 70 percent within that decade. So he probably saved more children's lives than anyone.

Now, there's various inventors of vaccines. There's Deng Xiaoping. There's various people who did things that saved a lot of children's lives. But he'd be certainly high on the list.

We – there's an area we operate that World Bank doesn't operate in, which is upstream research. So the invention of the malaria vaccine, World Bank does not put any money into that. They don't have people who know about that. The only – the other big funder of that is the National Institutes of Health, particularly the National Institute for Allergy and Infectious Diseases, Tony Fauci's part of NIH. They and over 80 percent of the infectious disease research funding comes either from us or from them. So they are a deep collaborator there.

With World Bank, the thing that we're super excited about – there's two things we're super excited about doing together. One is fixing primary health care because some African governments have done it well, a lot have not. And it's basically a personnel system. And we're doing a report card, like the World Bank Doing Business report card. And we're going to do that in the agricultural space, which is really about how do you turn your agricultural sector into – to make it as market driven as possible. Are you taking the latest seeds? Are you educating your farmers? Are your pricing policy, storage policies such that your farmers are being uplifted that the productivity and incomes are going up?

So we have some ambitious goals of things we want to do with the Bank. We actually – a lot of funding we do is through the Bank. It shows up because we create – like our polio account gets graded through the Bank. So they ended up facilitating things.

They have a lot of IQ. And Jim Kim has stated the goal that he wants to unlock that IQ in a more technical advice way, not just connected to the loans. Now, that's an ambitious goal. That goal's been stated before. So you know, now, he's trying to drive that even further.

So they're a very good partner. WHO, UNICEF, the CG ag research group. There's a lot of partnering involved in this, the development world.

MR. BROOKS: We're out of time. Before we finish, I just want to say it's an honor to – on behalf of all of my colleagues at AEI – to share an objective of a better world, particularly on behalf of those who can't fight for themselves and that aren't here represented today, but we are their intellectual and action representatives. What you're doing is truly important. We endorse it, and we appreciate it very much.

Before Mr. Gates leaves, I would like to ask that you all stay seated, so that he can get out. But of course, join me in thanking him for joining us. (Applause.)

MR. GATES: Thank you.

(Applause.)

(END)